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09/780,632

HT3765 US NA

APPEAL BRIEF

CERTIFICATE OF TRANSMISSION

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

**SURINDER M. MAINI**

CASE NO.: HT3765USNA

APPLICATION NO.: 09/780,632

GROUP ART UNIT: 1771

FILED: FEBRUARY 9, 2001

EXAMINER: JENNIFER A. BOYD

FOR: IMPROVED PROTECTIVE APPAREL FABRIC AND GARMENT

**APPEAL BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is a complete Appeal Brief, in triplicate, in support of the Appeal to the Board of Patent Appeals and Interferences for the above referenced Patent Application.

**Authorization to Charge Deposit Account**

Please charge the associated fee of \$330.00 [37 CFR 1.17(f)] to Deposit Account 04-1928 (E. I. du Pont de Nemours and Company). If the fee is insufficient or incorrect, please charge or credit the above-identified Deposit Account.

**Real Party in Interest**

The real party in interest is E. I. du Pont de Nemours and Company as confirmed by an assignment recorded in the United States Patent and Trademark Office on Reel 013939, frame 0068.

**Related Appeals and Interferences**

There are no other pending appeals or interferences known to Appellants.

**Status of Claims**

Claims 10-18 are pending in the above referenced patent application and are presented in the attached Appendix. Claims 1-9 and 19-21 have been cancelled.

**Status of Amendments**

No amendments have been filed and entered since the mailing of the final Official Action, dated June 2, 2005.

**Summary of the Invention**

This invention is woven fabric comprised of continuous filament yarn that is made of a co-mingled bundle of 10 to 90 wt % para-aramid filaments and 90 to 10 wt % meta-aramid filaments, (page 1, lines 33-35) wherein the yarn has a random entangled

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loop structure wherein the weight per unit length of the yarns is 3 to 25 percent higher than a continuous filament yarn having the same composition but no entanglement or loops (page 1, lines 27-32).

#### Grounds of Rejection

- I. Claims 10-18 are rejected under 35 USC 103(a) as unpatentable over US 4,120,914 to Behnke et al. (Behnke) in view of US 5,299,602 to Barbeau et al. (Barbeau) and further in view of US 6,349,531 to Kolmes et al (Kolmes).

#### Argument

To carry a rejection for obviousness under 35 USC 103, the Examiner must establish a prima facie case of obviousness, the requirements of which are presented in Chapter 2142 Legal Concept of Prima Facie Obviousness of the Manual of Patent Examining Procedure (MPEP). First there must be some suggestion or motivation in the reference to modify the reference or to combine the teachings of the references. Second there must be a reasonable expectation of success. Third, the reference or combined references must teach or suggest all of the claimed limitations. The Examiner has not done so.

The Examiner offers various teachings from both Behnke and Barbeau in support of the obviousness rejection. However, the Examiner does note that relative to claim 10 (the independent claim from which claims 11 -18 depend), Behnke in view of Barbeau fails to teach that the yarn has a random entangled loop structure. The Examiner takes the position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to create the yarn of Behnke in view of Barbeau with a random entangled loop structure as suggested by Kolmes.

The first prong of establishing a prima facie case of obviousness is not met because there is no motivation to combine Kolmes with Behnke and Barbeau to arrive at the invention as recited in claim 10. As noted above, the Examiner admitted that Behnke and Barbeau fail to teach that the yarn has a random entangled loop structure. The Examiner offers Kolmes as teaching that the air jet method is one well known texturing method, apparently inferring that such a disclosure suggests the claimed random entangled loop structure. It should be noted that Kolmes is directed to combining a cut-resistant fiber with a non-cut-resistant fiber and as disclosed at column 4, lines 3-6, Kolmes distinguishes air interlacing from air texturing in that the former is

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used to make a single intermittently commingled strand. Because the random entangled loop structure is not found in Behnke or Barbeau, the motivation would have to come from Kolmes. Except for citing the isolated language distinguishing air texturing from the process used to interlace the fibers of interest, the Examiner has not identified how Kolmes provides any motivation to combine with Behnke and Barbeau to arrive at the invention as recited in claim 10.

The second prong of establishing a prima facie case of obviousness is not met because there is no reasonable expectation of success. In the final rejection, the Examiner asserted that Kolmes positively teaches at column 1, lines 59-64 that loops would be present within the yarn and on the outside of the yarn. However, column 1, lines 59-64 only discloses that loops may be present and to repeat the passage that Examiner quoted in the Final rejection "some loops may be locked inside the yarn and others my (may sic) be locked on the surface of the yarn depending on a variety of process conditions and the structure of the air-jet texturing equipment used (emphasis added)". This language does not rise to the level of a positive statement and does not offer any expectation of success for the invention as claimed. It merely suggests the possibility that loops could be present and nothing else. This prospective language underscores the well-accepted proposition that just because the prior art could be modified would not make the modification obvious without a suggestion of the desirability from the prior art. Moreover, the statement does not negate the teaching in Kolmes at column 1, lines 55-60 that loops are opened and then closed. It is also instructive that US 3,912,174 cited by Kolmes at column 1, line 64 does not teach random entangled loops, but rather at column 2, lines 13-19 only discloses uniform repeating bulky and node sections. At any rate, there is insufficient basis in Kolmes to suggest the claimed limitation of random entangled loops, much less the desirability and/or reasonable expectation success of combining such loops with Behnke and Barbeau.

Applicant respectfully submits that the Examiner has failed to show a prima facie case of obviousness and respectfully requests that the rejection be withdrawn.

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**Conclusion**

The Board of Patent Appeals and Interferences is respectfully requested to reverse the final rejection so that the subject application would be allowable.

Respectfully submitted,



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Dated: November 1, 2005

FDS:kl

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**APPENDIX**

10. A woven fabric comprised of continuous filament yarn, consisting essentially of a co-mingled bundle of 10 to 90 wt % para-aramid filaments and 90 to 10 wt % meta-aramid filaments,  
said yarn having a random entangled loop structure wherein the weight per unit length of the yarns is 3 to 25 percent higher than a continuous filament yarn having the same composition but no entanglement or loops.
11. The woven fabric of Claim 10 wherein the weight per unit length of the yarn is 10 to 18 wt % higher than a continuous filament yarn having no entanglement or loops.
12. The woven fabric of Claim 10 wherein the yarn having a random entangled loop structure has a linear density of 200 to 1000 denier (220 to 1100 dtex).
13. The woven fabric of Claim 12 wherein the yarn having a random entangled loop structure has a linear density of 300 to 600 denier (340 to 680 dtex).
14. The woven fabric of Claim 10 made from a plain weave.
15. The woven fabric of Claim 10 made from a twill weave.
16. The woven fabric of Claim 10 wherein the para-aramid filaments are poly(paraphenylene terephthalamide) filaments.
17. The woven fabric of Claim 10 wherein the meta-aramid filaments are poly(metaphenylene isophthalamide) filaments.
18. The woven fabric of Claim 10 wherein the para-aramid filaments are poly(paraphenylene terephthalamide) filaments and are present in an amount of 50% and the meta-aramid filaments are poly(metaphenylene isophthalamide) filaments and are present in an amount of 50%.